

Just Get Out There
And Sample!



Quality Management Plan (QMP)

- *The Department is required by USEPA Region II to develop and maintain a QA program*
- *QMP prepared and approved every two years*
- *Defines Department's QA program*

QAPP Functions

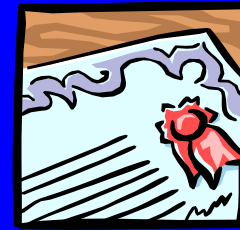
- *Communicate*
- *Summarize*
- *Document*
- *Audit*

QAPPs are Written in Accordance With:

*“Guidance on Quality Assurance
Project Plans (QA/G-5),”
February, 1998, USEPA*

Data Usage

- *Permits*



- *Enforcement*



- *Research*



Elements in Providing Quality Assurance

- *QAPP*
- *SOP*
- *Certification Programs*
- *P.T. Samples*
- *Data Validation*
- *Audits - Lab and Field*

Data Quality Requirements

- *Method Options*
- *Laboratory Specific MDLs*

Take Samples and Preserve in the Field

- *Deliver samples to lab within holding time*
- *“Analyze Immediately”
parameters must be done within fifteen minutes, i.e. DO, pH, TRC, Temp, sulfite*

Holding Times

- *USEPA sets holding times*
- *Outlined in 40 CFR*
- *N.J.A.C. 7:18 regulations*
- *Department field sampling procedures manual*

Sample Containers

- *Container must not react with sample*
- *Plastic containers - best for inorganic parameters*
- *Glass containers - best for organic parameters (teflon lined caps)*
- *Sterile container - required for microbiological*

Methods of Preservation

- *Acids control pH, keep metal ions in a dissolved state, and control biological action*
- *If Chlorine is present, add a reducing agent (ascorbic acid, sodium thiosulfate)*
- *Refrigerate at 4° C*
- *Freezing - tissues (fish, birds)*

Sample Cooling

- *Blue ice is discouraged. It does not generally maintain the temperature of the sample at 4° C or less.*
- *If using blue ice, it should be frozen at the time of use, and samples should be at 4° C before packing with it*

Sample Custody

- *Chain-of-custody record used for sample transfers*
- *Each sample transfer documented with signature, date, and time*
- *Sample access and handling controlled and documented*

Potential Errors in Sampling and Analysis

- *Taking samples at location or times that do not accurately represent the quality of the groundwater or effluent being sampled*

Potential Errors in Sampling and Analysis

- *Using equipment made of inappropriate material that may react with samples and contaminate them*

Potential Errors in Sampling and Analysis

- *Using sampling equipment that is not decontaminated prior to sampling and between sampling episodes*

Six Phases of a Project

- *Enthusiasm*
- *Dillusionment*
- *Panic*
- *Search for the Guilty*
- *Punishment of the Innocent*
- *Praise and Honor for the Nonparticipants*